Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

x7Ci

Cooperative Extension Work in Agriculture and Home Economics

Extension Service Circular 345 October 1940

LIBRARY OF THE
OFFICE OF EXPERIMENT STATIONS
DEC 11 1940
EXPERIMENT STATION FILE

STATISTICAL ANALYSIS OF 4-H CLUB WORK

With Special Reference to 1939 and The Work of County Club Agents

Barnard Joy, Senior Agriculturist,
and
Laurel Sabrosky,
Surveys and Reports Section

Contents

	Page
Introduction	1
4-H Club enrollment per county extension agent	1
Percentage of boys and girls reached by 4-H Club work	2
Percentage of 4-H members who reenroll	3
Percentage of completions	4
The typical 4-H Club agent	5
Supplement	6

DISTRIBUTION: A copy of this circular has been sent to each State extension director; State leader in county agricultural and home demonstration work; State leader and assistant State leader in 4-H Club work; extension editor; agricultural-college library; and experiment-station library.

1369-40

STATISTICAL ANALYSIS OF 4-H CLUB WORK

With Special Reference to 1939 and
The Work of County Club Agents

INTRODUCTION

The first in the series of statistical analyses of 4-H Club work in the United States was made with the data from the 1935 annual reports of extension work. Since that time, three annual statistical analyses have been made, and 1937 data were presented on maps showing the State figures for the four statistical measurements of 4-H Club work: Percentage of eligible young people reached; percentage of members who reenroll; percentage of members who complete their projects; and enrollment per county extension agent.1/

During the 5 years covered by those summaries and by this report, definite progress has been made in 4-H Club work in the United States in reaching and teaching all rural boys and girls 10 to 20 years of age, as indicated by these four measures. Because each measure covers only one phase of the enrolling and helping of rural boys and girls, all four must be considered together to estimate the progress that any one State has made. Since the 4-H Club program varies from State to State, advancement in any one of these phases may indicate greater progress in one State than similar advancement would in another.

In the four sections which follow, the progress in each phase is discussed and is illustrated by the maps which were published in the analysis of 1935 data as contrasted to new maps based on 1939 data.

4-H CLUB ENROLLMENT PER COUNTY EXTENSION AGENT

The enrollment of boys and girls in 4-H Club work increased from 997,744 in 1935 to 1,381,595 in 1939, an increase of 38 percent in the 5 years. However, the number of county extension agents increased from 5,213 in 1935 to 6,638 in 1939, or an increase of 27 percent. This resulted in an increase in the average number of 4-H Club members per county extension agent from 191 in 1935 to 208 in 1939, or 9 percent. This increase in number of boys and girls enrolled by agents is brought about by a small though quite general increase over most of the United States (figures 1 and 2, and table 1).

1/ Joy, Barnard. Statistical analysis of trends in 4-H Club work, with special reference to 1935. U. S. Dept. Agri. Ext. Serv. Cir. 247. August 1936.

_____ Statistical measurements of 4-H Club work, with special reference to 1936. U. S. Dept. Agri. Ext. Serv. Cir. 270. October 1937.

_____ 25 years of 4-H Club work. Analysis of statistical trends (with special reference to 1938). U. S. Dept. Agri. Ext. Serv. Cir. 312. June 1939.

Table 1.--Average number of 4-H Club members enrolled per county extension agent - 1935, 1939

Item	Number of States	
	1935	1939
Average number of members per agent:		
Under 125	9	10
125 - 174	17	15
175 - 224	8	9
225 or over	14	14

Although there was one more State with an average of less than 125 members per county extension agent in 1939 than in 1935, the average for that group increased from 93 to 113.

It is evident that the number of 4-H Club members a county extension agent can work with is limited. From 1920 to 1924, the average number of members per agent increased from 66 to 148, or 124 percent. From 1924 to 1931, the average number increased from 148 to 200, or 35 percent. Since that time, the average number has varied depending on the amount of time that could be devoted to 4-H Club work; and the small but steady increase has occurred within those areas where the average number of members per agent was below the average for the United States. An increase in average number of 4-H members per county extension agent probably depends on the percentage of the agent's time devoted to work with young people, particularly in those States which already enroll an average of 200 or more members per agent.

PERCENTAGE OF BOYS AND GIRLS REACHED BY 4-H CLUB WORK

With the increase in enrollment of 4-H Club members each year, a greater percentage of rural boys and girls is reached by club work. The 1935 4-H enrollment in the 48 States included 8 percent of the 12,558,815 rural (farm and nonfarm) boys and girls 10 to 20 years old reported in the 1930 census. The 1939 4-H enrollment included 11 percent of the rural boys and girls 10 to 20 years of age.

Similarly, the ratio between the first-year 4-H members and the total number of rural boys and girls reaching the average starting age as reported in the 1930 census increased from 36 in 1935 to 46 in 1939. While the total 4-H enrollment increased 38 percent from 1935 to 1939, the number of new members increased from 436,788 in 1935 to 556,626 in 1939. This means that 4-H Club enrollment is progressing along two lines: It is including an increasing portion of the eligible rural boys and girls each year, and at the same time those who have joined are remaining in the work for a longer period of time.

Figures 3 and 4 show the increase in percentage of eligible boys and girls being reached in each State in 1935 and in 1939. There were nearly

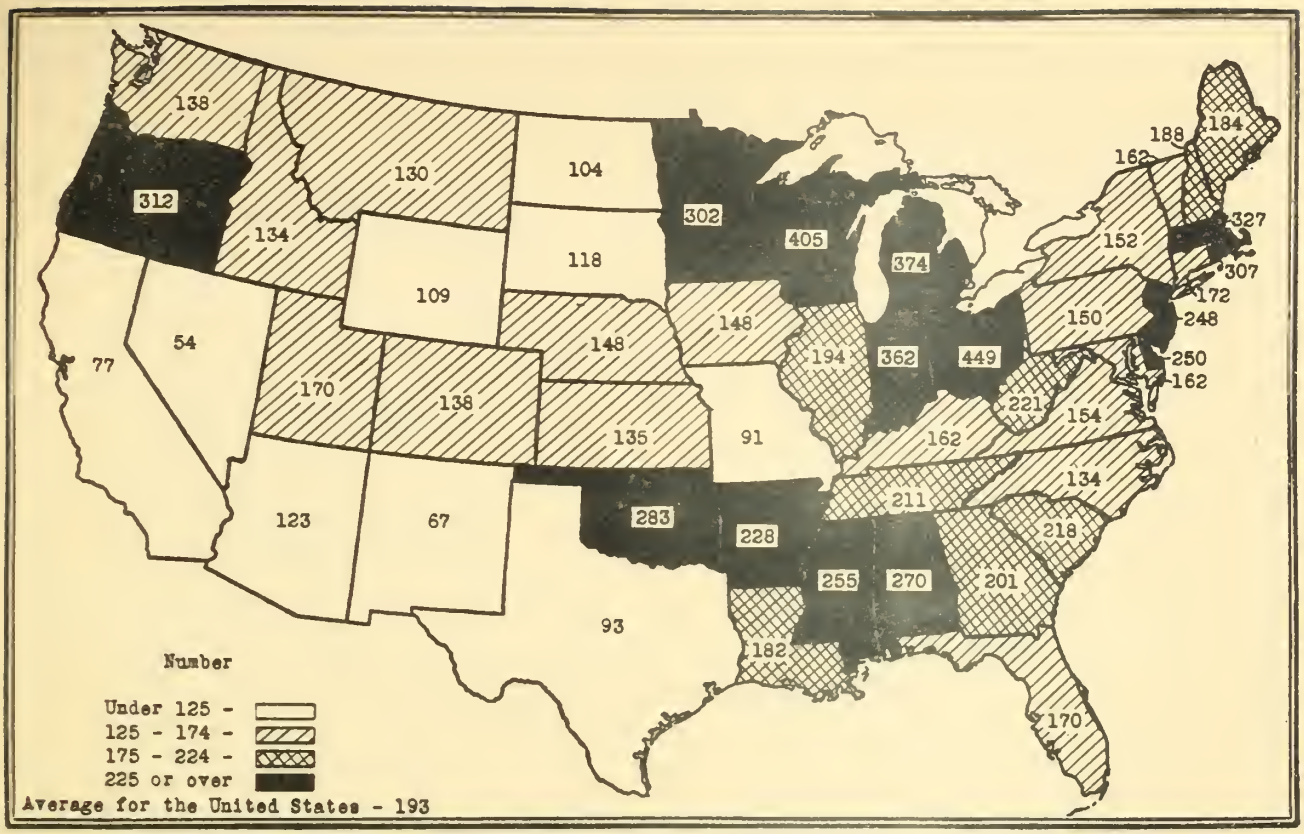

Figure 1.--Average number of 4-H Club members enrolled per county extension agent, 1935

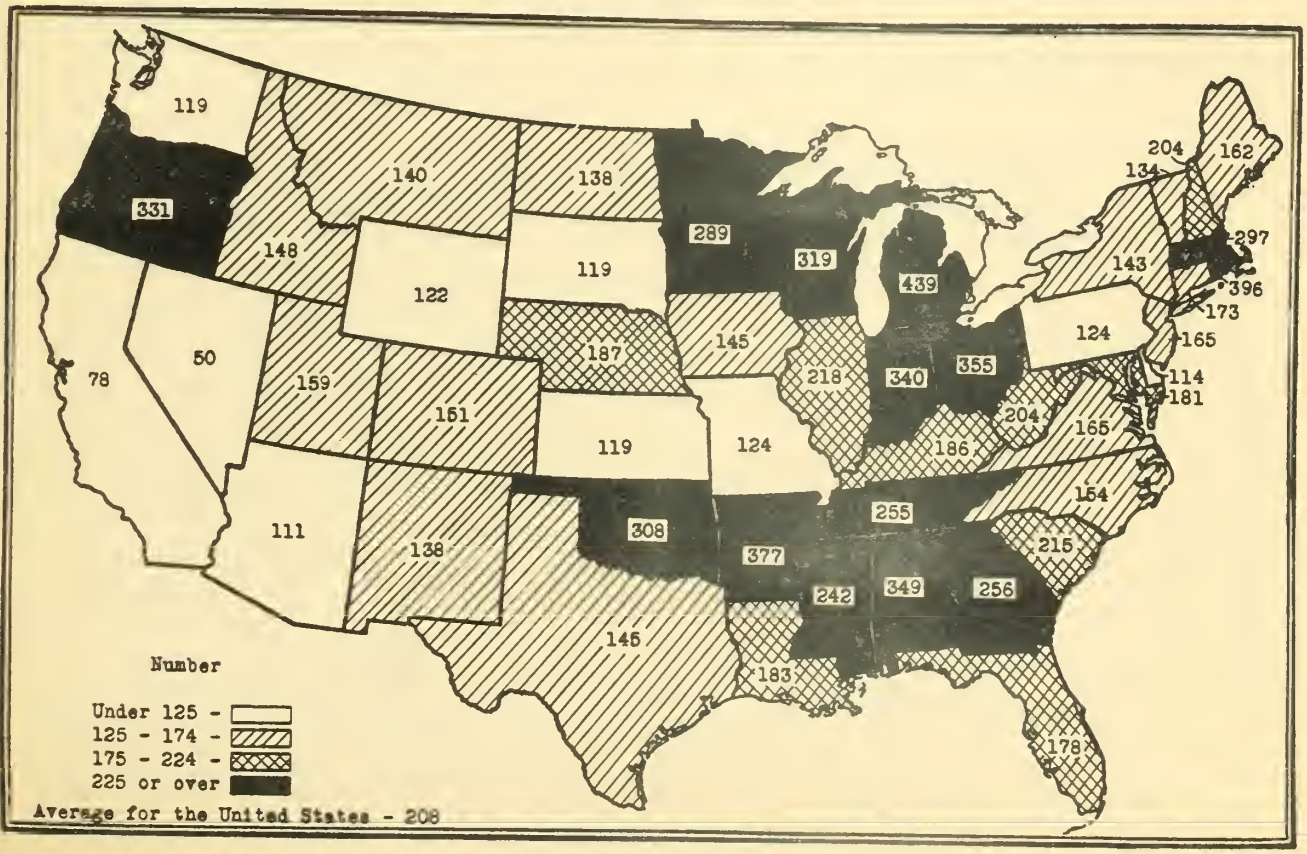

Figure 2.--Average number of 4-H Club members enrolled per county extension agent, 1939

twice as many States with a percentage of less than 30 in 1935 as in 1939 (table 2). In 1939 there were 27 States reaching 40 percent or more in contrast to 21 States in 1935.

Table 2.--Percentage of boys and girls reached by 4-H Club work - 1935, 1939.

Item	Number of States	
	1935	1939
Percentage of boys and girls reached:		
Under 30	16	10
30 - 39	11	11
40 - 49	9	11
50 or over	12	16

PERCENTAGE OF 4-H MEMBERS WHO REENROLL

An increase in the number of 4-H Club members who reenroll in club work means that a larger number of boys and girls get the benefit of 2 or more years of 4-H Club work rather than just 1 year. In 1935, 61 percent of the 1934 4-H Club members reenrolled. In 1939 64 percent of the 1938 4-H members reenrolled in 4-H Club work.

There is a noticeable tendency for more States to raise their percentage of reenrollment to 65 or more (figures 5 and 6). In 1935, 65 percent or more of the 1934 4-H members in 10 States were reenrolled, and in 1939 this was true in 22 States (table 3).

Table 3.--Percentage of reenrollment in 4-H Club work - 1935, 1939.

Item	Number of States	
	1935	1939
Percentage of reenrollment:		
Under 55	12	8
55 - 59	11	10
60 - 64	15	8
65 or over	10	22

Only 8 States in 1939 had less than 55 percent of the club members reenrolling. In 1935, there were 10 States with less than 50 percent reenrolled.

With an increase in reenrollment comes an increase in length of membership of the 4-H Club members. In 1935, the average length of membership for the United States was 2.54 years, and in 1939 it was 2.71 years. In 1939 those States which reenrolled lessthan 55 percent of their members had an average length of membership of 1.9 years. Those reenrolling over 64 percent of their members had an average length of membership of 3.0 years.

If a typical county extension agent were devoting all his time to 4-H Club work, he would enroll 600 or 700 4-H boys and girls. It is evident that there must be a balance between the percentage of his club members who are reenrolled and the percentage who are new members. An overemphasis on reenrollment will limit the number of new members he can enroll and, therefore, limit the number of rural boys and girls he can reach. In 1939 the 22 States reenrolling over 64 percent of their members had an average percentage of reenrollment of 68. These States already enrolling two-thirds of their members are probably holding their members as long as can be reasonably expected and still give adequate time to new members and maintenance of high standards of work.

PERCENTAGE OF COMPLETIONS

The percentage of 4-H Club boys and girls completing their project work increased from 71 percent in 1935 to 75 percent in 1939. This progress centers largely in those States which have been below the United States average. Of the 23 States which had an average percentage of completion below 75 percent in 1935, 10 had raised their averages to 75 percent or more by 1939 (figures 7 and 8). In 1935 there were 10 States with averages below 65 percent, and in 1939 there were only 3 (table 4).

Table 4.--Percentage of completions - 1935, 1939

Item	Number of States	
	1935	1939
Percentage of 4-H members completing:		
Under 65	10	3
65 - 74	13	11
75 - 84	17	21
85 or over	8	13

In 1935 there were 8 States in the group with an average percentage of completion of 85 or more, and in 1939 there were 13 in the group. Though this group has grown in size, the average percentage for the group was 87 in both 1935 and in 1939. For all the States to attempt to raise or to continue to raise their percentage of completions might in many cases necessitate a lowering of the standard of the work. More and more of the States are now reaching and maintaining a high percentage of completions. A very high percentage of completions reached at the expense of the quality of the club work may not be desirable and destroys the value of percentage of completions as a measure of 4-H Club work. The percentage of completions for the United States as a whole can, however, continue to increase as more of the low States reach the present national average of 75 percent.

The data on 4-H Club enrollment in 1939 again indicate that a larger 4-H Club enrollment per agent does not tend to lower the quality of 4-H Club work as measured by the percentages of completions and reenrollment

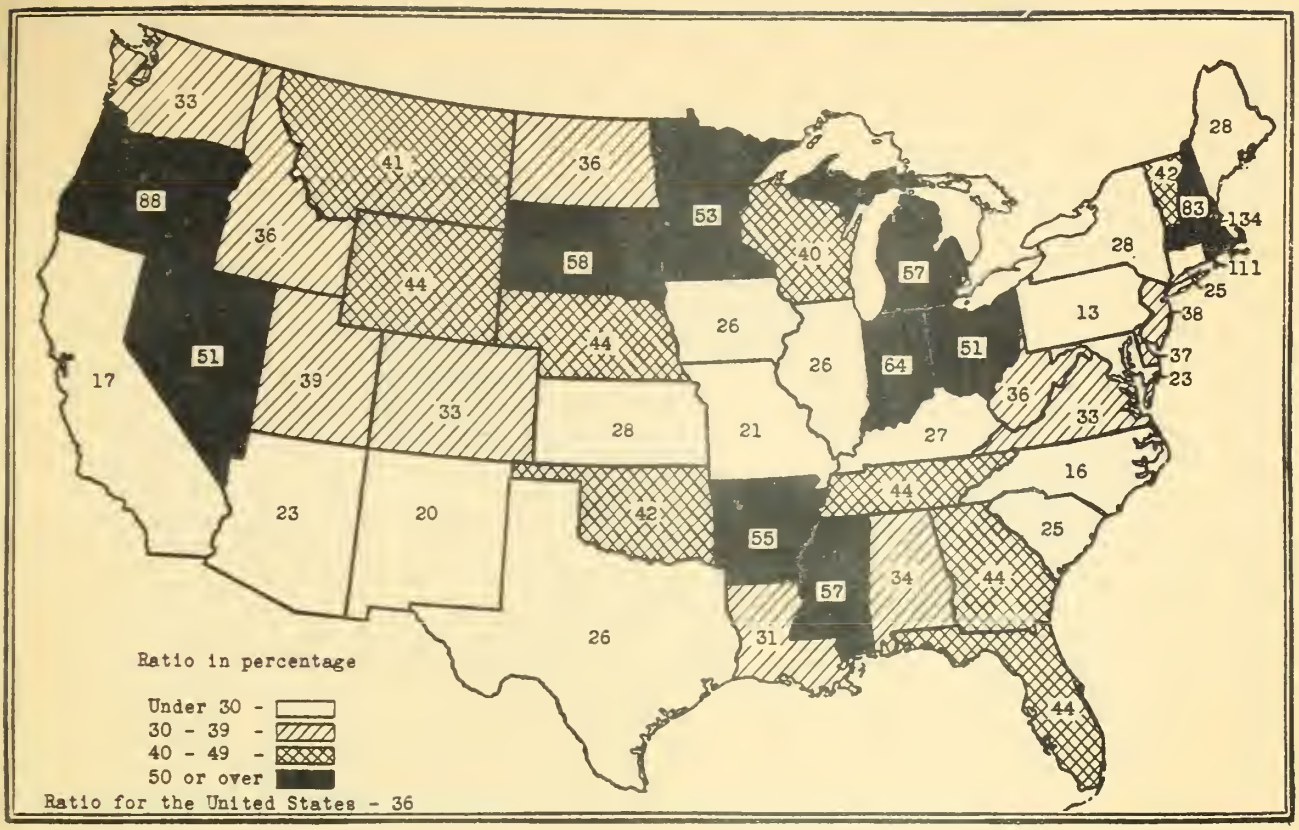

Figure 3.--Ratio of first-year 4-H Club members enrolled in 1935 to total number of rural (farm or nonfarm) boys and girls reaching the average 4-H starting age (average of those reported as 11 years of age and 12 years of age in 1930 census)

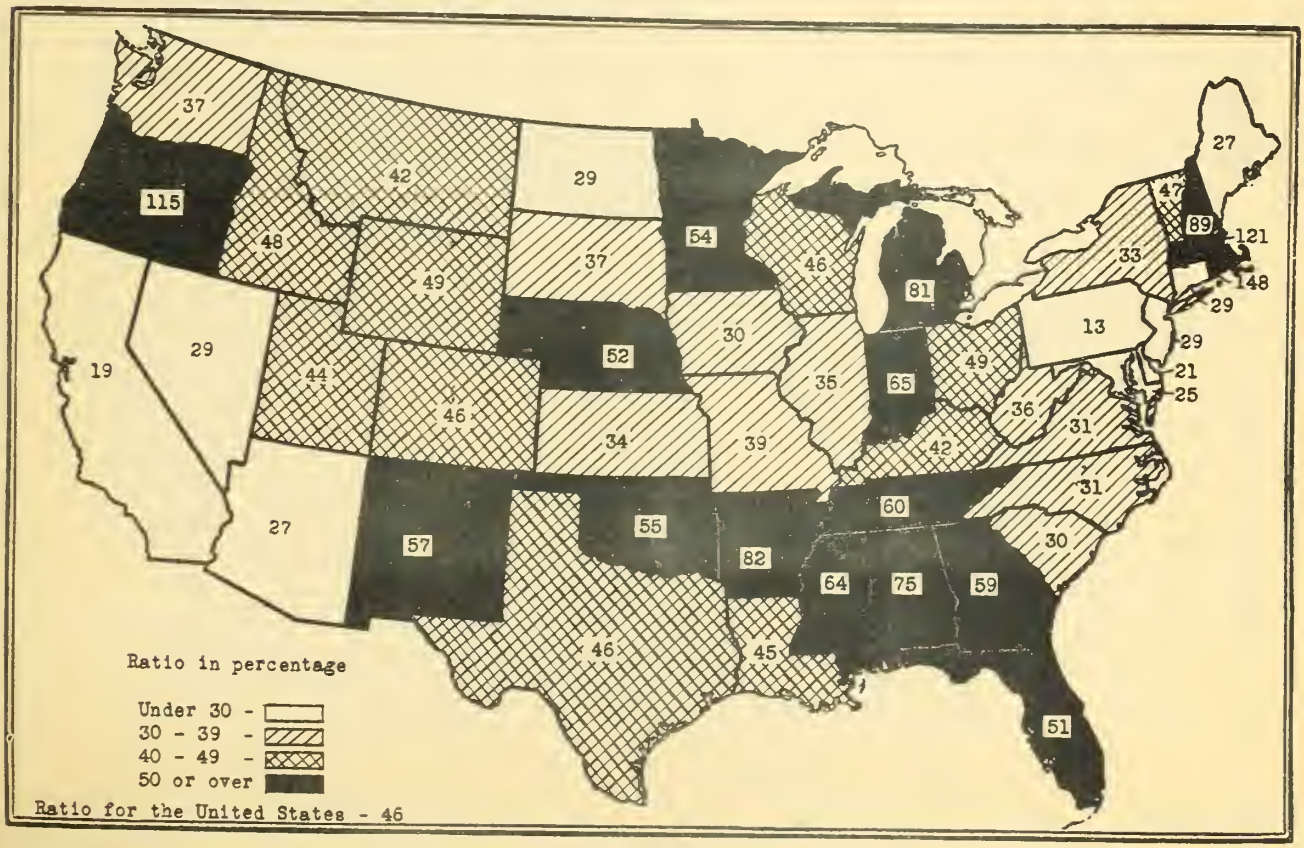

Figure 4.--Ratio of first-year 4-H Club members enrolled in 1939 to total number of rural (farm or nonfarm) boys and girls reaching the average 4-H starting age (average of those reported as 11 years of age and 12 years of age in 1930 census)

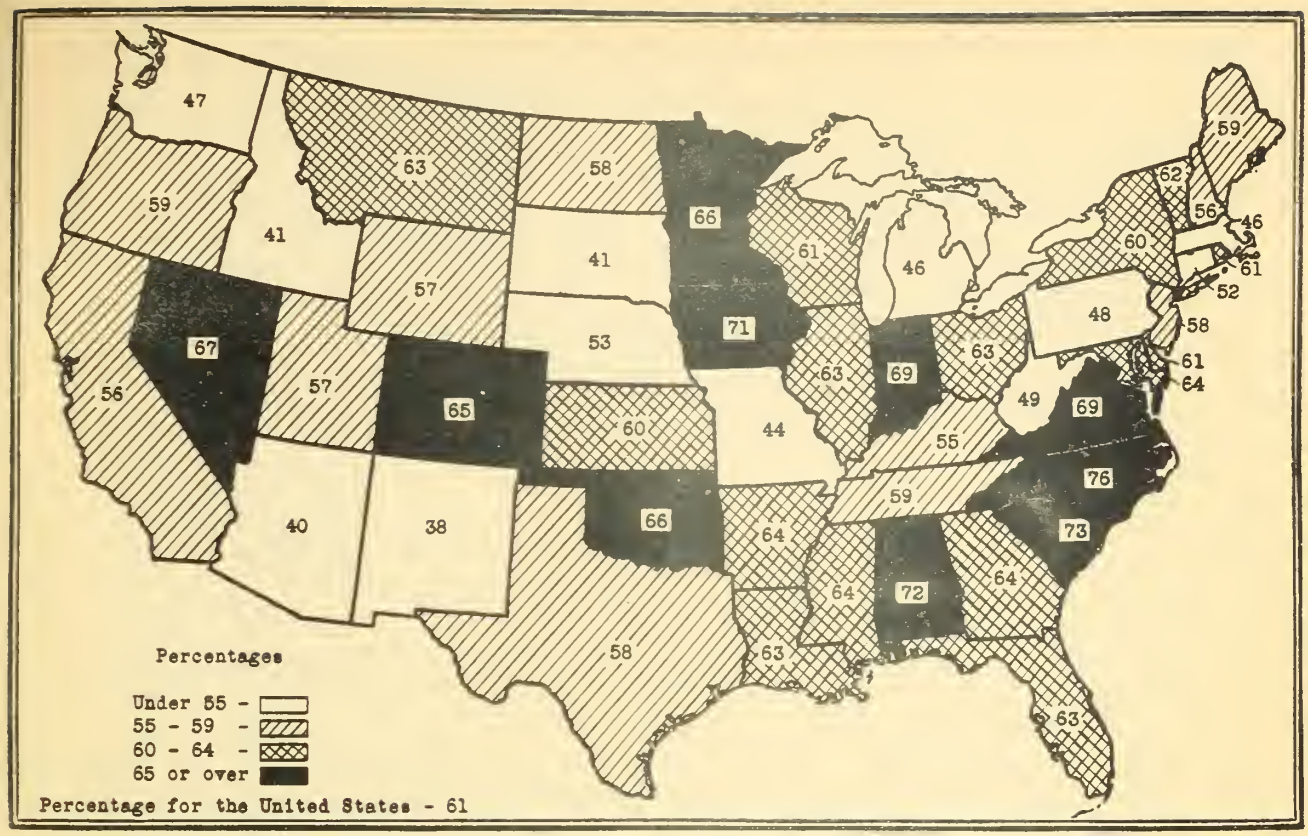

Figure 5.--Percentage of 1934 4-H Club members who reenrolled in 1935

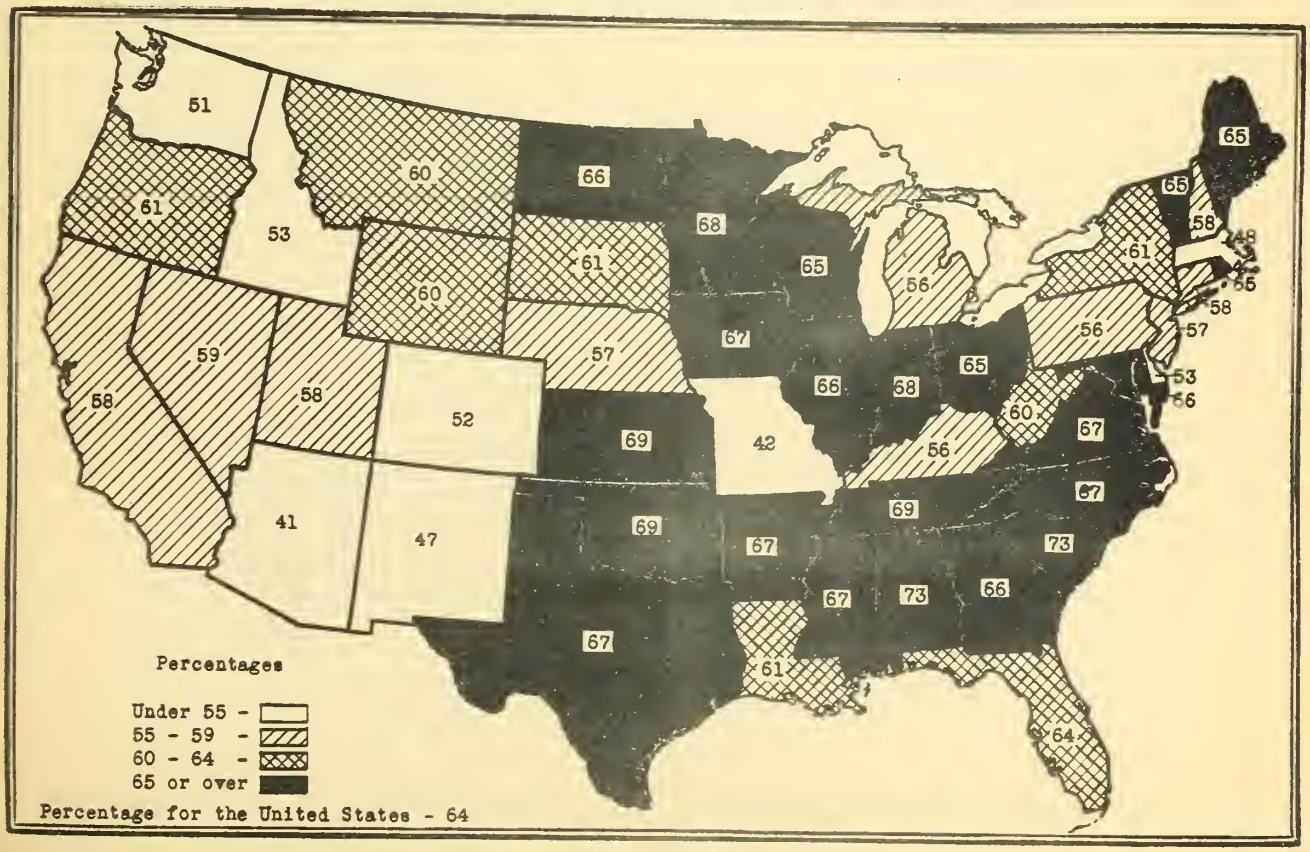

Figure 6.--Percentage of 1938 4-H Club members who reenrolled in 1939

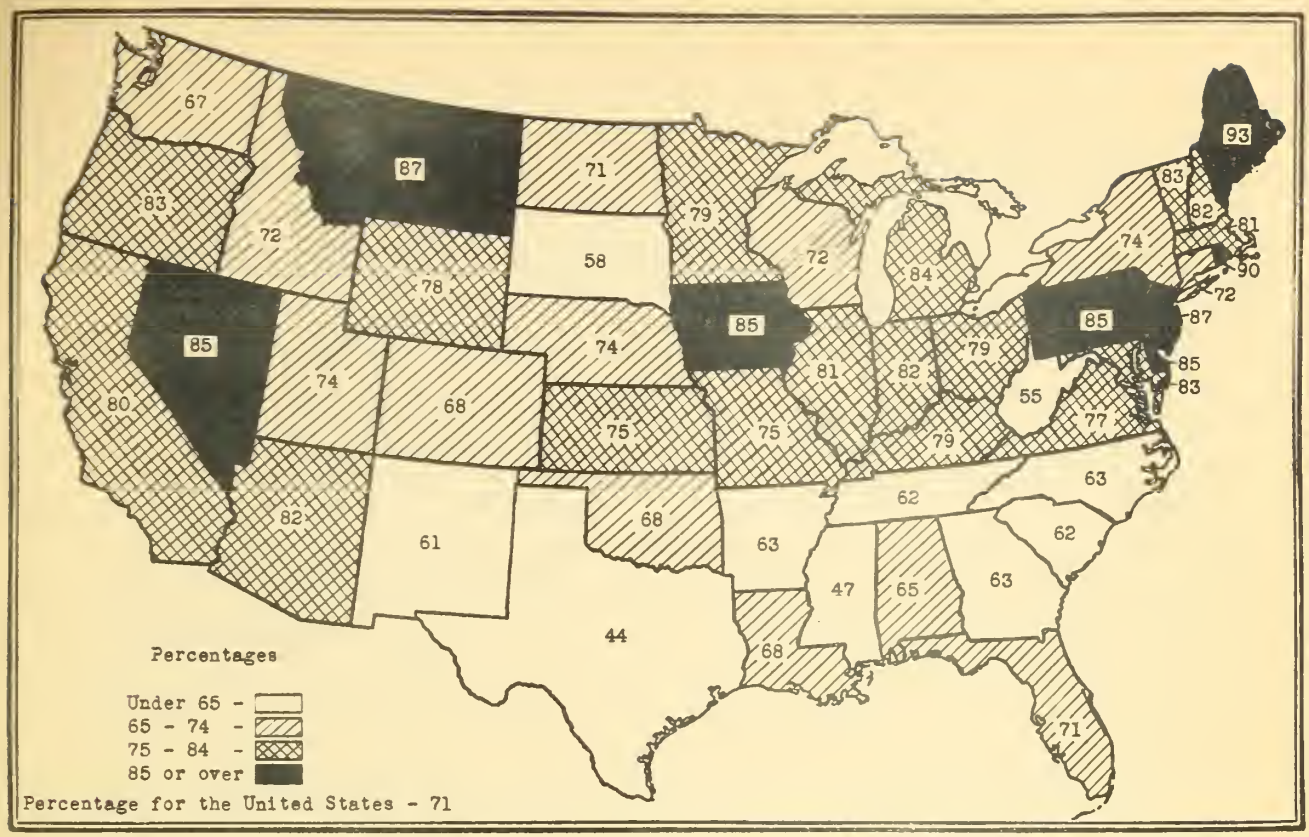

Figure 7.--Percentage of 4-H Club members enrolled who completed their project work - 1935

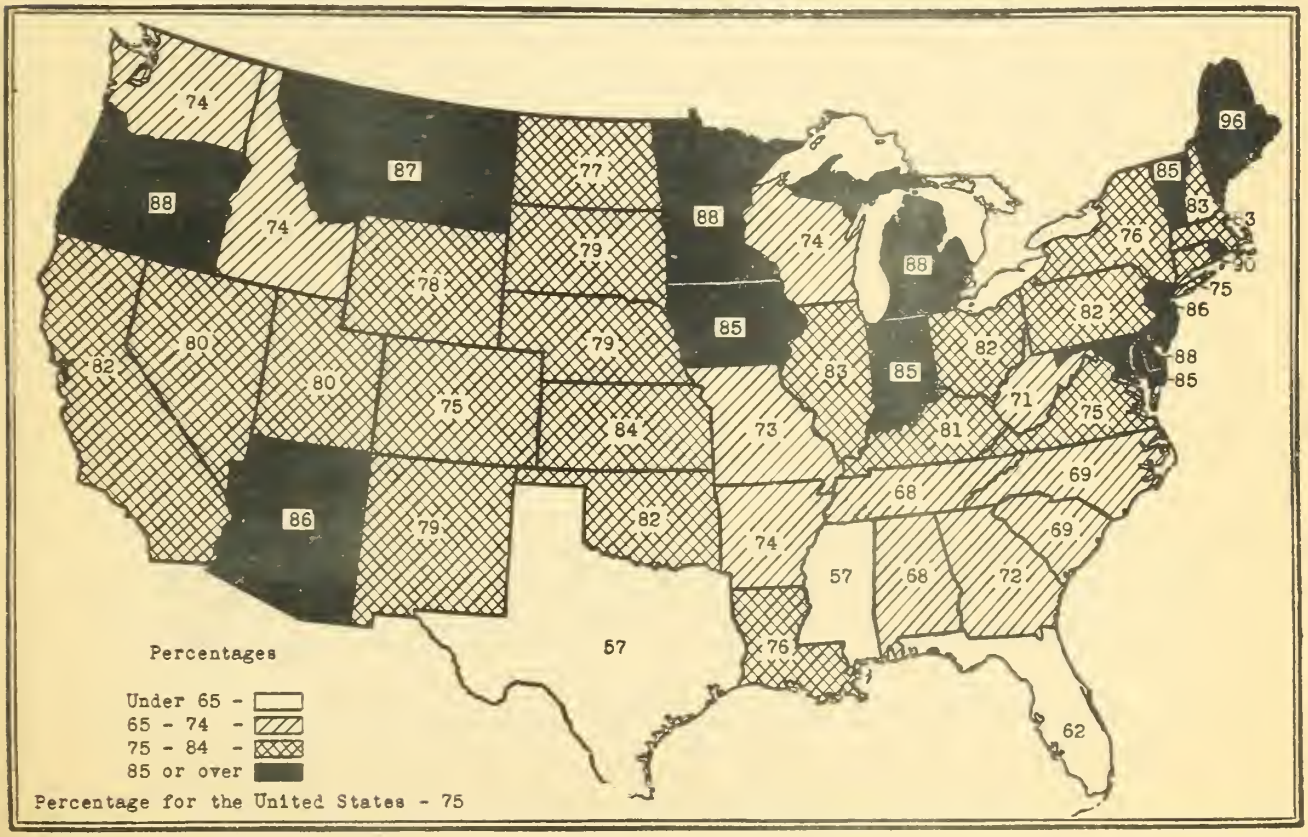

Figure 8.--Percentage of 4-H Club members enrolled who completed their project work - 1939

(table 5). There is some indication that the organizational set-up in a county and State that enables the agents to carry on 4-H Club work with a large number of boys and girls also tends to hold them in the work. Membership in a large, active organization, recognized as having an important place in the county, may in itself hold the interest of many boys and girls in the work for 2 or more years and inspire completion as a requisite for participation in well-organized and well-attended events.

Table 5.--Effect of size of 4-H enrollment upon percentage of completion and percentage of reenrollment for 1939 by States

Number of 4-H members per extension agent	Number of States	Average number per agent	Percentage of completion	Percentage of reenrollment
Less than 140	14	117.9	79.8	55.9
140 - 200	16	160.1	72.6	62.9
More than 200	18	294.3	75.6	66.4

THE TYPICAL 4-H CLUB AGENT

Most of the 4-H Clubs and 85 percent of the 4-H Club members in 1939 were supervised by county agricultural and home demonstration agents. The rest of the 4-H Club work (15,032 clubs and 212,302 members) was conducted by county club agents (or assistant agents in charge of 4-H Club work).2/ Three hundred and fifty-nine counties in 23 States reported one or more county club agents (or assistant agents in charge of 4-H Club work). As some of these counties had more than one such agent while others had part-time or summer agents, there was an equivalent of 368 full-time club agents in the United States in 1939. This number made up 5.6 percent of the total number of county extension agents.

The typical county 4-H Club agent devotes 90 percent of his time to 4-H Club work. He has 41 4-H Clubs under his supervision, with a membership of 577 boys and girls, an average of 14 members per club. Fifty-four percent are boys and 46 percent are girls. Eighty-two percent complete their project work.

The membership of these clubs differs somewhat from the membership of all the 4-H Clubs in the United States. Considering the 78,599 4-H Clubs in 1939, 43 percent of their membership were boys and 57 percent were girls, and each club averaged 18 members. Seventy-five percent of

2/ These figures include those 4-H Club members who are supervised by assistant county extension agents in charge of club work who, in the annual statistical report, separate the work they have done from the work done by the county agricultural agent.

all 4-H Club members in the United States completed their project work, which was 7 percent less than the completions in clubs supervised by the typical county club agent.

In order to carry on 4-H Club work in his county, the typical club agent spends 103 days in his office and 186 days in the field. There are 522 calls received in his office, and 529 telephone calls are made or received. The agent writes 2 individual letters for each day he is in the office, 2 news articles each week, and 1 circular letter each week. He distributes 1,400 bulletins during the year, and makes 5 radio broadcasts.

While in the field he makes 615 farm or home visits, or 3 visits each day. He visits 318 different farms or homes. He attends 216 meetings during the year. Seven of these are junior leader-training meetings which an average of 24 local leaders attend. Sixty-nine are method-demonstration meetings with an average attendance of 19. An average of 30 people attend each of the 14 result-demonstration meetings, and an average of 56 people attend each of the other 126 meetings that he attends. He supervises exhibits shown at 9 events during the year. Each 4-H Club in his county holds an average of 7 meetings which he does not attend.

Special 4-H events take up some of his time and bring him in closer contact with his 4-H Club members and their parents and friends. He attends 8 4-H Club achievement days each attended by an average of 147 people. He goes on 6 4-H tours averaging 29 people in attendance. Eighty-two boys and girls attend the 2 4-H Club camps attended by the agent.

The distribution of his time among the several fields of subject matter varies according to the emphasis placed on various phases of agricultural and home-economics work in the different parts of the country.

SUPPLEMENT

Table 6 on pages 7 and 8 presents additional statistical data by States for 1939.

Table 6.--4-H Club and other data by States, 1939

State	Enrollment 1938	1938 members reenrolled in 1939	Percentage reenrolled	New members 1939	Total enrollment 1939	Total completions 1939	Percentage completion 1939	County extension agents 1939 /1	Members per county extension agent	Rural boys and girls reaching 4-H starting age	Percentage reached by club work
Eastern											
Maine.....	6,123	3,954	64.6	2,516	6,470	6,216	96.1	40	161.8	9,370	26.8
N. H.....	7,057	4,059	57.5	3,078	7,137	5,938	83.2	35	203.9	3,460	39.0
Vt.....	4,796	3,103	64.8	2,245	5,353	4,563	85.2	40	133.8	4,792	46.8
Mass.....	19,150	9,249	48.3	9,744	18,993	15,797	83.2	64*	296.8	8,083	120.5
Conn.....	6,082	3,507	57.7	2,883	6,390	4,807	75.2	37	172.7	9,394	29.1
R. I.....	3,228	2,114	65.5	1,452	3,566	3,212	90.1	9	396.2	982	147.9
N. Y.....	30,163	18,439	61.1	12,613	31,052	23,532	75.8	217	143.1	38,510	32.8
Pa.....	17,939	10,122	56.4	9,295	19,417	16,013	82.5	157	123.7	71,466	13.0
N. J.....	10,358	5,894	56.9	3,994	9,888	8,465	85.6	60	164.8	13,728	29.1
Del.....	1,466	777	53.0	480	1,257	1,102	87.7	11	114.3	2,267	21.2
Md.....	10,922	7,261	66.5	3,391	10,652	9,005	84.5	59	180.5	13,755	24.6
W. Va.....	19,755	11,934	60.4	10,689	22,623	15,969	70.6	111	203.8	29,639	36.1
Subtotal	137,039	80,418	58.7	62,380	142,793	114,619	80.3	840	170.0	205,946	30.3
Central											
Ohio.....	56,641	36,885	65.1	22,353	59,238	48,547	82.0	167	354.7	45,199	49.4
Ind.....	49,989	34,002	68.0	19,373	53,375	45,183	84.6	157	340.0	29,638	65.4
Ky.....	40,984	22,834	55.7	18,163	40,997	33,358	81.4	220	186.4	43,024	42.2
Ill.....	32,517	21,505	66.1	14,455	35,960	29,999	83.4	165	217.9	41,275	35.0
Mich.....	43,773	24,459	55.9	26,856	51,315	44,990	87.7	117	438.6	33,340	80.6
Wis.....	30,877	20,036	64.9	14,116	34,152	25,203	73.8	107	319.2	30,904	45.7
Minn.....	45,396	30,858	68.0	15,708	46,566	41,059	88.2	161*	289.2	29,242	53.7
Iowa.....	26,133	17,518	67.0	9,409	26,927	22,845	84.8	186	144.8	31,022	30.3
Mo.....	27,035	11,300	41.8	14,553	25,853	18,753	72.5	208	124.3	37,275	39.0
N. Dak....	8,668	5,692	65.7	3,974	9,666	7,459	77.2	70	138.1	13,849	28.7
S. Dak....	9,862	6,000	60.8	4,749	10,749	8,491	79.0	90	119.4	12,943	36.7
Nebr.....	19,866	11,362	57.2	9,970	21,332	16,939	79.4	114*	187.1	19,276	51.7
Kans.....	21,258	14,706	69.2	8,256	22,962	19,264	83.9	193	119.0	23,931	34.5
Subtotal	412,999	257,157	62.3	181,935	439,092	362,090	82.5	1,955	224.6	390,918	46.5

/1 Number of county extension agents on Federal appointment June 30, 1939, except in States marked * in which cases the total months ofservice reported by county extension agents and assistants was divided by 12 to obtain number of agents on a yearly basis.

Table 5.--4-H Club and other data by States, 1939 (Continued)

State	Enrollment 1938	1938 members reenrolled in 1939	Percentage reenrolled	New members 1939	Total enrollment 1939	Total completions 1939	Percentage completion 1939	County extension agents 1939 [1]	Members per county extension agent	Rural boys and girls reaching 4-H starting age	Percentage reached by club work
Southern											
Va.	39,378	26,343	66.9	12,372	38,715	29,195	75.4	234	165.4	39,825	31.1
N. C.	46,040	30,742	66.8	18,324	49,066	33,880	69.0	319	153.8	59,996	30.5
S. C.	31,254	22,731	72.7	10,819	33,550	23,299	69.4	156	215.1	36,634	29.5
Ga.	76,968	50,898	66.1	29,786	80,684	57,813	71.6	315	256.1	50,281	59.2
Fla.	19,573	12,491	63.8	7,803	20,294	12,681	62.5	114	176.0	15,373	50.8
Ala.	90,421	65,823	72.8	34,235	100,058	67,639	67.6	287*	348.6	45,592	75.1
Miss.	59,207	39,389	66.5	25,038	64,427	36,872	57.2	266	242.2	38,966	64.2
Tenn.	61,856	42,387	68.5	24,540	66,927	45,722	68.3	262	255.4	41,067	59.8
Ark.	67,950	45,709	67.3	29,240	74,949	55,538	74.1	199	376.6	35,454	82.5
La.	30,813	18,792	61.0	13,998	32,790	25,039	76.4	179	183.2	30,958	45.2
Okla.	54,290	37,281	68.7	20,984	58,265	47,841	82.1	189	308.3	38,175	55.0
Tex.	68,145	45,586	66.9	36,142	81,728	46,638	57.1	564	144.9	78,837	45.8
P. R.	3,567	2,132	59.8	2,847	4,979	4,375	87.9	85*	58.6	---	--
Subtotal...	649,462	440,304	67.8	266,128	706,432	486,532	68.9	3,169	222.9	511,158	51.5
Western											
Mont.	8,369	5,059	60.4	3,476	8,535	7,392	86.6	61	139.9	8,186	42.5
Idaho.	4,720	2,431	52.6	3,597	6,078	4,479	73.7	41	148.2	7,536	47.7
Wyo.	2,830	1,732	60.1	1,563	3,295	2,563	77.8	27	122.0	3,177	49.2
Colo.	9,165	4,779	52.1	5,329	10,108	7,601	75.2	67*	150.9	11,528	46.2
Utah.	5,311	3,099	58.4	2,774	5,873	4,675	79.6	37	158.7	6,381	43.5
Nev.	836	526	59.4	277	803	640	79.7	16	50.2	948	29.2
N.Mex.	7,095	3,351	47.2	4,109	7,460	5,919	79.3	54*	138.1	7,154	57.4
Ariz.	2,843	1,164	40.9	1,599	2,763	2,390	86.5	25	110.5	5,968	26.8
Calif.	11,669	6,761	57.9	5,221	11,982	9,854	82.2	153	78.3	26,937	19.3
Oreg.	19,909	12,232	61.4	10,639	22,871	20,152	88.1	69	331.5	9,249	115.0
Wash.	10,710	5,470	51.1	5,160	10,630	7,914	74.4	89*	119.4	13,840	37.3
T. H.	2,585	1,233	47.7	1,138	2,371	2,042	86.1	31	76.5	---	---
Alaska.	382	203	53.1	301	504	382	75.8	4*	126.0	---	---
Subtotal...	86,529	48,090	55.6	45,183	93,273	76,003	81.5	674	138.4	100,954	43.3
GRAND TOTAL..	1,286,029	825,969	64.2	555,626	1,381,595	1,039,244	75.2	6,638	208.1	1,208,976	45.6

Extension Service Circular 345 October 1940

Statistical Analysis of 4-H Club Work

With Special Reference to 1939 and The Work of County Club Agents

Barnard Joy
Laurel Sabrosky

UNITED STATES DEPARTMENT OF AGRICULTURE
EXTENSION SERVICE
M. L. WILSON, *Director*
REUBEN BRIGHAM, *Assistant Director*
WASHINGTON, D. C.